



## Disaster and Emergency Management Resources

### Thunderstorms Management Measures

#### Before a Thunderstorm Occurs

- Develop a Family Disaster Plan and Supply Kit (See Sections 2.2 – 2.4)
- Undertake the following measures to protect your property:
  - Keep trees and shrubbery trimmed – particularly tree limbs close to your house. Make trees more wind resistant by removing diseased or damaged limbs and then strategically removing branches so that wind can blow through.
  - Remove any debris or loose items in your yard. Branches and firewood may become missiles in strong winds.
  - Install lightning rods.
- If planning a trip involving extended time outdoors, listen to the latest forecasts and take necessary action if threatening weather is possible. Knowing what weather could happen helps you to be prepared to respond if necessary. Having a raincoat, umbrella, and disaster supplies kit available will make it easier to deal with severe weather if it occurs.
- Listen to the radio for thunderstorm watches and warnings issued in your area.
- Postpone outdoor activities if thunderstorm watches and warnings are issued in your area. Coaches of outdoor sports teams should have a NOAA Weather Radio with a tone-alert feature during practice sessions and games. Threatening weather can endanger athletes, staff, and spectators. Many people take shelter from the rain, but most people struck by lightning are not in the rain! Postponing activities is your best way to avoid being caught in a dangerous situation.

### **What to Do at Home During a Thunderstorm**

- Unplug appliances. Avoid using the telephone or any electrical appliances. If lightning strikes, telephone lines and metal pipes can conduct electricity. Leaving electric lights on, however, does not increase the chances of your home being struck by lightning.
- Avoid taking a bath or shower or running water for any other purpose. Metal pipes and plumbing can conduct electricity if struck by lightning.
- Turn off the air conditioner, home computer, and television. Power surges from lighting can result in a costly repair job.
- Secure outdoor objects such as lawn furniture that could blow away or cause damage or injury. Take light objects inside.
- Bring pets inside.

### **What to Do if Outdoors During a Severe Thunderstorm**

- Listen to a NOAA Weather Radio or local radio or television stations for updated information. Local authorities will provide you with the best information for your particular situation.
- Avoid natural lightning rods such as golf clubs, fishing poles, tractors, bicycles, and camping equipment. Lightning is attracted to metal and poles or rods.
- Be prepared to seek shelter if a severe thunderstorm approaches. A sturdy building is the safest place to be during a severe thunderstorm. Avoid unprotected gazebos, rain or picnic shelters, golf carts, baseball dugouts, and bleachers. While many people take shelter from rain in these locations, they are often isolated structures in otherwise open areas, and, therefore, a target for lightning. In addition, gazebos and picnic shelters are often poorly anchored and subject to being uprooted and blown around in strong winds. They also offer little protection from large hail.
- If there are no reinforced buildings in sight, take shelter in a car. Keep car windows closed and avoid convertibles. Rubber-soled shoes and rubber tires provide no protection from lightning. However, the steel frame of a hard-topped vehicle provides increased protection if you are not touching metal. Although you may be injured if lightning strikes your car, you are much safer inside a vehicle than outside.

- If you are boating or swimming, get to land, get off the beach, and find shelter immediately. Stay away from rivers, lakes, and other bodies of water. Water is an excellent conductor of electricity. When lightning strikes nearby, the electrical charge can travel through the water. Each year, numbers of people are killed by nearby lightning strikes while they are in or on the water.
- If you are in the woods, find an area protected by a low clump of trees. Never stand underneath a single large tree in the open. Be aware of the potential for flooding in low-lying areas.
- As a last resort and if no structure is available, go to a low-lying, open place away from trees, poles, and metal objects. Make sure the place you pick is not subject to flooding. Have as little contact with the ground as possible. Squat low to the ground. Place your hands on your knees with your head between them. Make yourself the smallest target possible. Do not lie flat on the ground; this will make you a larger target.

### **What to Do While Driving During a Thunderstorm and Heavy Rain**

- Pull safely onto the shoulder of the road and stop, making sure you are away from any trees or other tall objects that could fall on the vehicle. Stay in the car and turn on the emergency flashers until the heavy rains subside. Heavy rains produced by thunderstorms can greatly reduce visibility. Vehicles will provide better protection from lightning than being out in the open. Emergency flashers will alert other drivers with limited visibility that you have stopped. Keep car windows closed.
- Avoid contact with metal or conducting surfaces outside or inside the vehicle. Lightning that strikes nearby can travel through wet ground to your car. The steel frame of a hard-topped vehicle provides increased protection if you are not touching metal. Rubber tires provide no protection from lightning. Avoid contact with potential conductors to reduce your chance of being shocked. Although you may be injured if lightning strikes your car, you are much safer inside a vehicle than outside.
- Drive cautiously and avoid flooded roadways. Most flood fatalities are caused by people attempting to drive through water or playing in high water. The depth of water is not always obvious. The roadbed may be washed out under the water, and you could be stranded or trapped. Rapidly rising water may stall the engine, engulf the vehicle and its occupants, and sweep them away. Look out for flooding at highway dips, bridges, and low areas. Two feet of water will carry away most automobiles.

### **What to Do After a Thunderstorm**

- Continue listening to local radio or television stations or a NOAA Weather Radio for updated information and instructions. Access may be limited to some parts of the community, or roads may be blocked.
- Help a neighbor who may require special assistance, such as infants, elderly people, and people with disabilities. Elderly people and people with disabilities may require additional assistance. People who care for them or who have large families may need additional assistance caring for several people in emergency situations.
- Stay away from storm-damaged areas. You may be putting yourself at further risk from the residual effects of severe thunderstorms.
- Watch out for fallen power lines and report them immediately. Reporting potential hazards will get the utilities turned off as quickly as possible, preventing further hazard and injury.
- Drive only if necessary. Debris and washed-out roads may make driving dangerous.

### **What to Do if Someone Is Struck by Lightning**

- Call for help. Get someone to dial 9-1-1 or your local Emergency Medical Services (EMS) number. Medical attention is needed as quickly as possible.
- Give first aid. If breathing has stopped, begin rescue breathing. If the heart has stopped beating, a trained person should give CPR. If the person has a pulse and is breathing, look and care for other possible injuries.
- Check for burns in two places. Injured persons who have received an electrical shock and may be burned, both where they were struck and where the electricity left their body. Being struck by lightning can also cause nervous system damage, broken bones, and loss of hearing or eyesight. People struck by lightning carry no electrical charge that can shock other people, and they can be handled safely.

*Adapted from resource material developed by the Federal Emergency Management Agency and the National Weather Service*